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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,719	02/09/2001	Gary J. Jorgensen	NREL 97-33	7599

23712 7590 02/07/2002

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EXAMINER

CHANG, AUDREY Y

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 02/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,719

Applicant(s)

JORGENSEN ET AL

Examiner

Audrey Y. Chang

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other:

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 2-3 and 9-10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.**

4. The specification fails to teach how could the ultraviolet absorbing film be formed by simply an acrylic polymer, polycarbonate, polyester, polyethylene, polyethylene naphthalate or fluoropolymer.

These polymers by themselves will not be able to absorb ultraviolet radiation.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1-7 and 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

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The phrase "the exposed surface" recited in claims 1 and 8 is indefinite since it is not clear which surface is considered here as the exposed surface. This phrase also lacks proper antecedent basis from earlier part of the claims.

Claims 2-7 and 9-11 inherit the rejection from their respective based claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-2, 4-7, 8-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Roche et al (PN. 4,645,714) in view of applicant's admitted prior art.**

Roche et al teaches a *corrosion-resistant silver mirror* that is comprised of a *substrate* (21) made of *polyester foil*, a *thin specularly reflective silver layer* (13), a *protective polymeric layer* (15) and a *second polymeric layer containing ultraviolet absorber* (16) *overlaying* the protective polymeric layer, (please see Figure 2, column 6). Roche et al teaches that the *second polymeric layer containing the ultraviolet absorber* is an *acrylic polymer layer*, (please see column 6, lines 65-69).

This reference has met all the limitations of the claims with the exception that it does not teach explicitly that the thickness of the UV absorbing polymeric layer is as claimed. However acrylic film having thickness of 2-8 mil is rather well known in the art and is commercially available (commercially known trade name KORAD KLEAR 05005) as disclosed by the applicant in the specification page 7 lines 10-14. It would then have been obvious to one skilled in the art to use the commercially known acrylic

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film having thickness 2-8 mil as the based polymeric material to make the UV-absorbing polymeric layer for the benefit for its easy availability.

With regard to claims 4-7 and 11, Roche et al teaches that the second polymeric layer having the UV absorber is *coated* on the protective polymeric layer but it does not teach explicitly that the coating process are the process recited in the claims. However the *product-by-process limitations* of the claims are given *no patentable weight* per se but are only given weight in terms of how they distinguish the final product. In this cases, the processes of adhesive, solvent weld, thermal weld and ultrasonic weld are all well-known processes in the art for attaching the polymeric layer to the other layer and they therefore do not patently distinguish the silver mirror with the UV absorbing polymeric layer of the instant application from the prior art silver mirror with the UV absorbing polymeric layer, (please see MPEP section 2173.05(p)). With regard to claim 11, since gluing, adhesive or welding are well-known process for coating the UV absorbing polymeric layer such modifications would have been obvious variations to one skilled in the art for the benefit of attaching the layer to the protective layer of the silver mirror.

9. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Roche et al and applicant admitted prior art as applied to claims 1 and 8 above, and further in view of the patent issued to Sugisaki et al (PN. 5,681,642).

The corrosion-resistant silver mirror with ultraviolet absorbing polymeric layer taught by Roche et al in combination with the teachings of applicant's admitted prior art as described for claims 1 and 8 above have met all the limitations of the claims. Roche et al teaches that the polymeric material for the UV absorbing layer is acrylic polymer but it does not teach explicitly that this polymeric layer may also comprise other polymers as claimed. However UV absorbing film with good corrosion-resistant made by including UV absorber in polymeric layer such as polycarbonate or polyester is very well known in the art as demonstrated by the teachings of Sugisaki et al, (please see column 3, lines 34-69). It would then have

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been obvious to one skilled in the art to apply the teachings of Sugisaki et al to make the UV absorbing polymeric layer with polycarbonate or polyester polymeric layer for the benefit of providing alternative UV absorbing polymeric layer for the silver mirror.

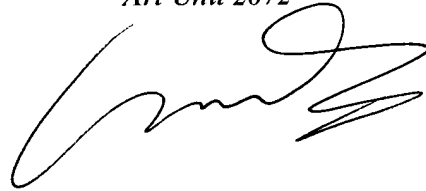
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 703-305-6208. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1637. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

*Audrey Y. Chang
Primary Examiner
Art Unit 2872*



A. Chang, Ph.D.
February 5, 2002